

(Practitioner's Docket No. 780-99-014-23973)

AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated below.

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1. (Previously Presented) An oil filter, comprising:
a hollow housing having an inlet and outlet in defining a chamber therein with a flow path between the inlet and the outlet;
a mechanically active filter member disposed inside the housing in the flow path;
and
a chemically active filter member disposed inside the housing in the flow path;
wherein the chemically active filter member comprises a plurality of pellets, retained within said filter so as to provide an oil flow path through said chemically active filter member and past said pellets during operation, said pellets having a diameter in a range of 0.10 to 3 mm, said pellets comprising:
a polymeric binder which is present in a range of 3-20 percent by weight of the total weight of the pellet; and
a basic salt selected from the group consisting of calcium carbonate, potassium carbonate, potassium bicarbonate, aluminum dihydroxy sodium carbonate, magnesium oxide, magnesium carbonate, zinc oxide, sodium bicarbonate, sodium hydroxide, calcium hydroxide, potassium hydroxide, and mixtures thereof, the basic salt being present in a range of 80-97 percent by weight of the total pellet weight.
2. (Original) The oil filter of claim 1, wherein the polymeric binder is selected from the group consisting of polyamides, polyimides, polyesters, polyolefins, polysulfones, and mixtures thereof.
3. (Original) The oil filter of claim 1, wherein the mechanically active filter element is substantially cylindrical in shape, and wherein the chemically active filter element is also substantially cylindrical in shape and is disposed radially and coaxially inside of said the mechanically active filter element.

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4. (Original) The oil filter of claim 1, wherein the pellets of the chemically active filter member are connected together to form a substantially integral permeable member.

5. (Previously Presented) The oil filter of claim 1, wherein the pellets comprise the result of a process comprising the steps of:

providing the polymeric binder in a finely divided form;

mixing the polymeric binder with a basic salt in a liquid solvent; and

forming a mixture of binder in salt into pellets; and removing the salt from the pellets by evaporation.

6. (Original) The oil filter of claim 5, wherein the solvent used in pellet formation is organic solvent.

7. (Previously Presented) An oil filter, comprising:

a hollow housing having a base plate for placement proximate and engine surface, said base plate having an outlet aperture formed therethrough and inlet aperture formed therethrough in spaced apart from said outlet aperture;

a mechanically active filter element disposed within said housing spaced away from said base plate;

a substantially cylindrical dividing wall member disposed within said housing adjacent said base plate;

said dividing wall member defining an inlet flow channel on the outside thereof within the housing in fluid communication with said inlet aperture of said base plate,

said dividing wall member further defining an outlet flow channel therein in fluid communication with said outlet aperture of said base plate; and

a chemically active filter member disposed within said inlet flow channel of said housing between said base plate and said mechanical filter element,

said chemically active filter member comprising a plurality of pellets, retained within said filter so as to provide an oil flow path through said chemically active filter

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member and past said pellets during operation, said pellets having a diameter in a range of 0.10 to 5 mm, said pellets comprising:

a polymeric binder which is present in a range of 3-20 percent by weight of the total weight of the pellet; and

a basic salt selected from the group consisting of a basic salt selected from the group consisting of calcium carbonate, potassium carbonate, potassium bicarbonate, aluminum dihydroxy sodium carbonate, magnesium oxide, magnesium carbonate, zinc oxide, sodium bicarbonate, sodium hydroxide, calcium hydroxide, potassium hydroxide, and mixtures thereof, the basic salt being present in a range of 80-97 percent by weight of the total pellet weight.

8. (Original) The oil filter of claim 7, further comprising a foraminous divider disposed between the chemically active filter element and the mechanically active filter element.

9. (Previously Presented) The oil filter of claim 7, wherein the pellets of the chemically active filter element comprise the product of a process comprising the steps of:

providing the polymeric binder in a finely divided form;

mixing the polymeric binder with a basic salt in a liquid solvent;

forming a mixture of binder in salt into pellets; and

removing the solvent from the pellets by evaporation.

10. (Previously Presented) A supplemental cartridge for use in conjunction with an oil filter, said a supplemental cartridge comprising:

a hollow housing, comprising

a base plate for placement proximate and engine surface, said base plate having an outlet aperture formed substantially centrally therethrough and inlet aperture formed therethrough and spaced apart from said outlet aperture;

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a cap opposite said base plate for placement proximate an oil filter, said cap having an inlet aperture formed substantially centrally therethrough and an outlet aperture formed therethrough and spaced apart from said inlet aperture;

an outer wall connecting said cap and said base plate; a substantially cylindrical dividing wall member disposed within said housing and separating said housing interior into an inlet flow channel in fluid communication with said inlet aperture of said base plate, and an outlet flow channel in fluid communication with said outlet aperture of said base plate; and

a chemically active filter member disposed within said inlet flow channel of said housing, said chemically active filter member comprising a plurality of pellets, retained within said cartridge so as to provide an oil flow path through said chemically active filter member and past said pellets during operation, said pellets having a diameter in a range of 0.1 to 5 mm, said pellets comprising:

a polymeric binder which is present in a range of 3-20 percent by weight of the total weight of the pellet; and

a basic salt selected from the group consisting of calcium carbonate, potassium carbonate, potassium bicarbonate, aluminum dihydroxy sodium carbonate, magnesium oxide, magnesium carbonate, zinc oxide, sodium bicarbonate, sodium hydroxide, calcium hydroxide, potassium hydroxide, and mixtures thereof, the basic salt being present in a range of 80-97 percent by weight of the total pellet weight.

11. (Currently Amended) The supplemental cartridge of claim 10, wherein the pellets of the chemically active filter element ~~bar~~are a product of a process comprising the steps of:

separating the polymeric binder into a finely divided form;
mixing of the polymeric binder with a basic salt and a liquid solvent;
forming a mixture of binder in salt into pellets; and
removing the solvent from the pellets by evaporation.

12. (Original) The supplemental cartridge of claim 10, further comprising:

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an auxiliary inlet tube attached to said outer wall of said housing and being in fluid communication with said inlet flow channel thereof; and

an auxiliary outlet tube attached to said outer wall of said housing and being in fluid communication with said interior thereof.

13. (Previously Presented) An oil filter, comprising:

a housing having an inlet and outlet in defining a chamber therein with a flow path between the inlet and the outlet;

a mechanically active filter member disposed inside the housing in the flow path; and

a chemically active filter member disposed inside the housing in the flow path and comprising a plurality of pellets having a diameter in a range of 0.10 to 3 mm and comprising:

a polymeric binder present in an amount of from 3-20 percent by weight, based on the total pellet weight; and

a basic salt present in an amount of from 80-97 percent by weight, based on the total pellet weight,

wherein the plurality of pellets are bonded together or cohesively associated with one another to form a substantially integral but porous chemically active filter member that is self-supporting.

14. (Previously Presented) The oil filter of claim 13 wherein the polymer binder is selected from the group consisting of polyamides, polyimides, polyesters, polysulfones, and mixtures there.

15. (Previously Presented) An oil filter, comprising:

a housing having an inlet and outlet in defining a chamber therein with a flow path between the inlet and the outlet; and

a chemically active filter member disposed inside the housing in the flow path and comprising a plurality of pellets having a diameter in a range of 0.10 to 3 mm and comprising:

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a polymeric binder present in an amount of from 3-20 percent by weight, based on the total pellet weight; and

a basic salt present in an amount of from 80-97 percent by weight, based on the total pellet weight,

wherein the plurality of pellets are bonded together or cohesively associated with one another to form a substantially integral but porous chemically active filter member that is self-supporting.